

# The Relationship between the Needs changes of Public or Personal and Rational Expanding of Government Scale

## RELATION ENTRE LES CHANGEMENTS DE BESOINS PUBLICS OU INDIVIDUELS ET EXPANSION RATIONELLE DES FORCES DU GOVERNMENT

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**Abstract:** The law of the needing levels discovered by Maslow is a famous theory, but the theory mainly works in private domain. In this paper, the Maslow's law is deduced into public domain, putting on the idea of public Maslow's phenomena and the public maslow's law. By methods of theoretical analysis blended with positive analysis, quality analysis blended with quantity analysis, the ideas presented above have been tested and verified. In the end of the paper, it points out that public Maslow's law is an important cause for the expanding of public department as well as for the rational expanding of government scale.

**Keywords:** The Maslow's law, public realm, the scale of government

**Résumé:** La loi du niveaux de besoins découverts par Maslow est une fameuse théorie, mais cette théorie fonctionne principalement dans les domaines privés. Dans ce document présent, la loi de Maslow est déduite dans le domaine public, en mettant les idées du phénomène public de Maslow et de sa loi publique. A travers les méthodes théoriques d'analyse mélangée avec l'analyse positive, analyse qualitative mélangée avec l'analyse quantitative, les idées exprimées dans le précédent étaient testées et vérifiées. A la fin de ce document, il désigne que la loi publique de Maslow est une explication importante pour l'expansion du département public à la fois pour l'expansion rationnelle des forces du government.

**Mots-clés:** loi de Maslow, realm public, les forces du government

Maslow's Law is nearly known by everyone in the realm of Arts and Society. It is frequently quoted in economics, sociology and public management. In this article, this famous law will be introduced and applied into the analysis of the change of government scale.

### 1. SOME THEORETICAL RETROSPECT OF EXPANDING OF THE SCALE OF THE GOVERNMENT

Discussion about the reasons for the increase of government scale has always been a great attraction for scholars. Since Parkinson's discovery in 1957, people have been continuing discussing all kinds of possible reasons for the increase of the scale of government. Now let's discuss these theories respectively.

#### 1.1 Analysis about phenomena of the expanding of government scale

Some scholars summarized the rule of the expanding of government scale. For example<sup>2</sup> (ZhangYalin,2001): "Form the developing political history of both domestic and foreign counties in ancient time and nowadays, we can see that the scale of the government has been constantly increasing with the development of economy and human culture."<sup>3</sup> (XieQingkui, 1991): "Government scale developed form a simple to complicated form after it came into being, which adapted to the need of development of country and gradual expansion of human social life. It is a historic process that can't be changed

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<sup>2</sup> ZhangYalin, *Suitable Government Scale and the Administrative Framework Reforming in Our Country, comparison between social economic systems*, 2001, (03).

<sup>3</sup> XieQingkui, *Chinese Government Today*, published by Liaoning People's Publishing House, 1991, page 10.

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by human's will."<sup>4</sup> (Aberbach, 1990): "There seems to be one industry that is constantly increasing in the modern world, that is the industry of government machinery."

## 1. 2 Demonstration about the rule of increase of the amount of public affairs

For example, "the rule of constant increase of financial expenditure" of German economist A.Wagner, "the theory of financial expenditure's ladder gradual increase" of Britain's A.T. Peacock and J.Wisemen, and "the module of increasing financial expenditure" of R.A. Musgrave and W.W. Rostow.

On one hand, these theories imply that the price of public service will go up with the price of the common consumer goods. On the other hand, they contain the content and scope of the public service and the deepening of the original service. At the same time, Wagner provided three reasons for the rational expanding of government. First, constructing reasonable social system, strengthening law and rules and keeping the social order to keep the market system functioning are the needs evolved with the development of society. Second, government takes part in producing. Third, people's needs for public goods are increasing. However, he didn't deeper elucidate why government is constantly expanding.<sup>5</sup>

A.Wagner thinks that after we entered an industrialized stage, the amount and proportion of public section in economic life has been developing with the development of economy and culture, which is an immanent trend of constant increase. And the reasons for the appearance of this trend are these; firstly, with the rapid development of industrialization, social surroundings, economic system and market system are required to be protected by the country. Secondly, the result of the industrialization is the more complication and specialization of production. And this requires efficient public service. Thirdly, public foundation establishment are mainly monopoly industries, which need huge investment and are necessary items for keeping society developing and stable, so no one can afford it but the government.<sup>6</sup>

Britain scholar A.T.Peacock and J.Wisemen testified A.Wagner's rule with the data of Britain's public spending from 1890 to 1995. And they found that A.Wagner's rule is still valid in modern economic society.

## 1. 3 American scholar William Niskanen took an analyzing method of "new political economy"

He presented a module of budget of bureaucracy whose independent variable is public products;  $TB = aQ - bQ^2$

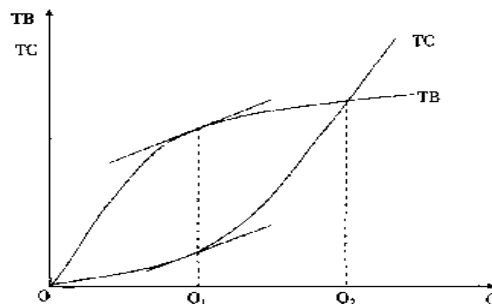


图 1 尼斯坎南官僚政府模型

Picture1 The model of bureaucratic government by William Niskanen (USA)

## 1. 4 The theory of public choice

Among these theories, the theory of public choice presents a special explanation for the scale of the modern government and its increase. "This kind of explanation can be induced into the following points: ①expanding of government is the result of government's providing public service and eliminating externality. ②government's acting as the conditioner of the reallocation of social treasure also stimulates the expanding of itself. ③ Pressure form group-benefit. ④Bureaucrats and bureaucracy. ⑤ Financial illusion. It means that people can be cheated by legislative and administrative departments with the total ratat. This is a hypothesis about people measuring their government by means of their ratepaying".<sup>8</sup> While, there is no further explanation about the above. What's more, the delegate of theory of public choice Dennis C.Mueller thinks: "that we can't testify that it is the increase of personal income that causes the relative increase of government".<sup>9</sup>

I think that the achievements generalized in ① and ② are discussion about the rule of phenomena, while the achievements in ③ and ④are discussion about interior factors

<sup>4</sup> ZhangYalin, *Suitable Government Scale and the Administrative Framework Reforming in Our Country, comparison between social economic systems*, 2001, (03).

<sup>5</sup> Harold Demsetz, *Economics, Legal, and Political Dimensions of Competition*, Shanghai, published by Sanlian publishing house, 1992, page 89.

<sup>6</sup> Niskanen, *Bureaucracy and public economics*, translated by WangPuxun, published by China Youth Publishing House, 2004, page 156.

<sup>7</sup> Niskanen, *Bureaucracy and public economics*, translated by WangPuxun, published by China Youth Publishing House, 2004, page 156.

<sup>8</sup> ZhuangChuisheng, HuangDaxing, *Of the Scale of Government and Its Expanding---Inspiration from Public Choice*, magazine seek the truth, 2001, (01)

Dennis. C. Mueller, *Theory of Public Choice*, published by China Social Science Publishing House, 1999, page 391 to 414.

<sup>9</sup> Dennis C.Mueller, *Theory of Public Choice*, published by China Social Science Publishing House, 1999, page 393.

for expanding of the government scale. The essence of these ways of thinking is the same as Parkinson's.

## 1. 5 Other researches

Professor ZhangKangzhi(2000) made deep qualitative analysis of government's irrational expansion. However, I think that we can discuss the problem professionally from a rational view. And MaJunqing(1998) presented his opinion: the fundamental reason of the government expanding is the stimulating of the social needs and the society's increasing needs for government.<sup>10</sup>

The researches above enriched our knowledge of the expanding of the scale of government from a different point of view. While the question that Mueller put forward (we can't testify it is the increase of personal income that causes the relative increase of government) enlightens subsequent researchers including me to think about one question from this angle, the question is whether we can explain the expanding of the government from the angle of exterior of the government, the increase of social personal income and the change of personal needs. What's more, I think that, according to the symmetrical conception of conception of irrational increase, which was presented by Professor ZhangKangzhi, the change of the government scale caused by the increase of personal income and change of personal needs should be "rational expanding of the government scale". And MaoShoulong (2003) said: "It's far from enough for us to make so many conclusions, for we haven't done enough research of it, at least from the point of view of demonstration."<sup>11</sup> So I think that it's necessary for us to untiringly analyze the rational increase of government both theoretically and demonstratively.

Public rights are built on the base of private rights and its base, and similarly, public affairs are based on private affairs. "Private rights are the resource and base of public rights."<sup>12</sup> "Any powers are all with out exception have a precondition of demisability of people's rights and public recognition."<sup>13</sup> So according to this base of recognition, discussion about "what cause relative expanding of government scale" from an angle of "personal income" is a logical advancing of the recognition of expanding of government scale.

<sup>10</sup> ZhangKangzhi, 'Restricting the Scale of Government', magazine *administration forum*, 2000 (04), page 7 to 13.

<sup>11</sup> MaoShoulong and LiMei, *Economic analysis of limited government*, published by Shanghai Sanlian Publishing House.2000, page 87.

<sup>12</sup> HongXuejun, *Weltanschauung and Methodology of Civil Law*, web pages from Research Center of Knowledge and Property Right Law, Research Institute of Comparative Civil Litigation law and the Research Center of Civil Commercial Law, Southwestern Politics and Law University; <http://www.xinanfxlt.com/ShowFxls.asp?ID=94>, 2003-10-16

<sup>13</sup> ZhuoZeyuan, *Of the Nomocracy Country*, published by Chinese Square Publishing House, first edition in June,2001, page 62.

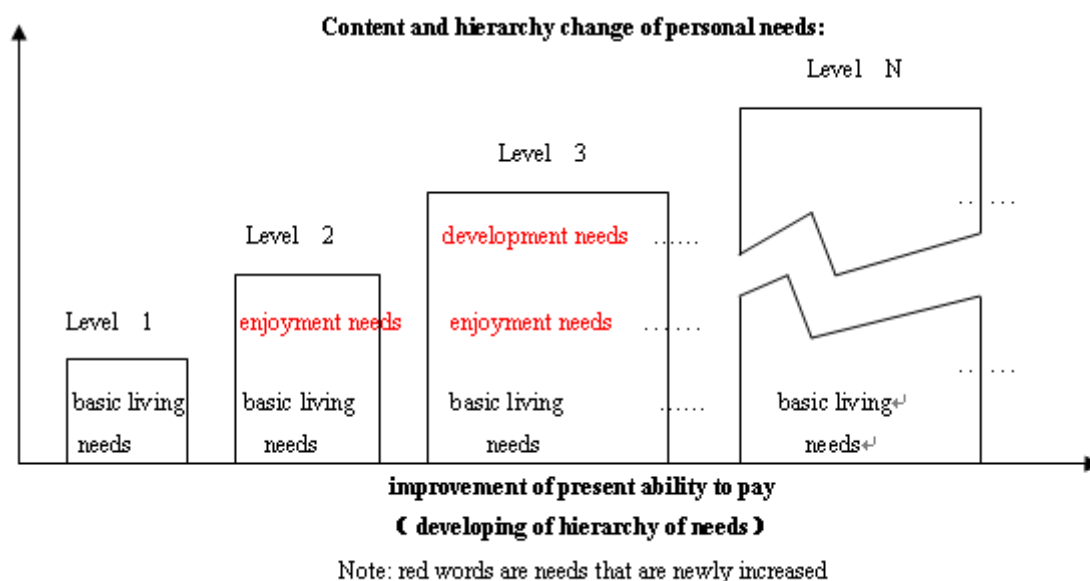
## 2. SIMPLE ANALYSIS OF MASLOW'S LAW

The famous American Scholar Abraham h.Maslow, (1908-1970), put forward his world well-known **theory of hierarchy of needs** in the book, *A theory of Human Motivation Psychological Review*, which was published in 1943. In this theory, Maslow assumed that generally there are five basic needs among people, which are the following; First, physiological needs, which include the necessary material needs without which we can't survive, such as food, clothes, houses and so on. Second, safety needs, which are the factors like a stable job, a safe living condition and so on. Third, social needs, such as friendship, love, communicating, family and so on. Fourth, esteem needs, which are the needs to be respected and to have a social fame or status.

Fifth, self- actualization, which is to try one's best to make his life interesting and meaningful.

There are two points for Maslow's Law. One is that the needs which mentioned in the law are based on the present ability to pay, not on an empty idea. The other is the gradual containment of the hierarchy of the needs. With the increase of people's present ability to pay, people's hierarchy of needs will develop further, from the basic level to a more advanced one. Maybe we can name these hierarchies of needs in the sequence from low to high; the first level, the second level, the third level ... and the Nth level. In the process of the changing of the needs, a higher need level may contain a lower level, or we can say a lower need level is contained in a higher one. That is to say, a higher need level doesn't overthrow the whole lower level, it is the new needs that are increased on the base of the lower one. We can illustrate this in a figure.

On one hand, to the most extent, what figure1 implies is somewhat a macroscopic meaning. In fact in the microscopic lay, there are concrete different needs between individuals. That's to say in the same level, the needs that different people have are various. (For example, for food, people have different demands in different periods. In a society where there are not very opulent, people just don't want to endure hunger; while in a rich and stable society, people's basic needs will accordingly enter a higher level where they may hunt for more balanced nutrition or the healthier and more delicious food which is good for health and mind.) So it's just a universal meaning (Maslow drew the rule from collected samples.), and it can't ensure individual's concrete demand completely fit the rule. On the other hand, the content of different needs is always changing. For example, we all have "basic needs" in level 1 and level 2, while in level 2, the content of basic needs is not the same as that in level 1, it's of higher quality. Accordingly, we have the demands for enjoyment in the second level as well as in the third level. Well, it's no doubt that the content in the third level is more advanced than that in the second level.



**Figure 1 the relation among Maslow's need hierarchies**

Addition: the mathematic proof for “the extension of Maslow's law in private realm towards public realm”.

### 3. THE CHANGE OF PUBLIC NEEDS

Now I will discuss the same law step by step which exists in public realm that is similar to the one in private realm focusing on demands and consumption.

#### 3.1 The gathering of private Maslow's phenomena

In order to discuss the topic conveniently, we regard the Maslow's law we've discussed above as “the Maslow's law in private realm”, and the phenomena it reflects as “private Maslow's phenomena”. Accordingly, we regard these social phenomena, which are the reflection of changing public demands and consumption, as public Maslow's phenomena or social Maslow's phenomena. This kind of phenomena is the gathering of private Maslow's phenomena.

People's activities always take place both in private realm and public realm. While a lot of personal consumption will gather in public realm. For the whole society, we often see these Maslow's phenomena in public realm which caused by those in private realm. For example, we usually find that the consumption of entertainment materials, houses, cars, sports apparatus and such kind of things interact in public realm, not only staying in their own personal realm. So I name these public problems or public activities caused by personal activities the extension of personal activities towards public activities. Here's an example. Making law and rule of food market and something related to it is the result of personal food consumption. And the requirement of strengthening Internet safety is a natural result of the increase of many people's internet surfing. Similarly, people's screeching for cars calls for the public management of buses, parking and public transportation. Thus, the gathering of each kind private Maslow's phenomena will certainly cause the accumulating needs for public management in the correspondent field.

Suppose there are “n” separate persons in a certain region (that's to say that each one isn't dominated by the other persons and has their own freedom to do things). The probability of each one's private Maslow's need leading public activities is “p”, according to the experimental list module of Bernoulli, the mathematic expectation of the stochastic independent variable  $\xi$  (whether cause public activities or not) is  $n \times p$ , and the square difference is  $n \times p \times q$ ,  $q = (1 - p)$ , and according to Laplace's rule of integral limit, when “n” is comparatively bigger (generally when  $n \geq 120$ ), the probability of leading to public activities caused by a ~ b persons simultaneously is ;

$$p(a < \xi < b) \approx \Phi(b) - \Phi(a) \\ = \Phi\left(\frac{b - np}{\sqrt{npq}}\right) - \Phi\left(\frac{a - np}{\sqrt{npq}}\right)$$

In the formula,  $\Phi$  stands for normal distributing function, and  $\Phi_0$  stands for standard normal distributing function.

We'd suppose might as well;  $n = 1000$ ,  $p = 0.1$  ( this is a relative small probability);  $(a, b) = (75, 150)$ . we can get the result p from calculation,  $p(75 < \xi < 150) = 0.990097$  and then;  $p(\xi > 75) \geq p(75 < \xi < 150) = 0.990097$  (this is a very high probability, nearly equal the necessary incident).

The above calculation shows that even if there is very small probability of deriving public activities in private Maslow's phenomena, there will be many deriving inevitable and simultaneous public activities caused by the public.

On the other hand, Maslow's phenomena in the private realm and public realm are somewhat correspondingly related with each other; they are closely connected together. When the Maslow's phenomena in the private realm come to a more advanced period, what in the public realm will accordingly come to the more advanced state. And what's more, accompanying the Maslow's phenomena in the private realm

coming to a more advanced period, new public needs will appear.

### 3.2 Change of other public needs

The social present ability to pay is becoming better and better, however, there are some other public needs that are not directly accumulated by the activities in private realm. In fact, with the constant developing social present ability to pay, there's correspondent expanding of public needs, which is formed naturally. For example, with the developing of economy, we are more aware of the importance of eco-environment, thus large quantities of environmental projects come into being. And the investment to system of guarding safety and fundamental instruction will go on increasing as well.

Therefore, we can infer that needs of public department is being constantly enriched and developed, including the increase of the content and the promotion of the content of the previous needs.

### 3.3 Increase of the average social energy

With the help of the principle of entropy increase in energetics, it's easy for us to understand the rule of the increase of public affairs as the economy develops. According to the principle of entropy increase, there is a series of disorders in the society with the development of economy. That is to say, average social energy.<sup>14</sup> will increase automatically. We can see it in the following forms: ① more social and economic communication. ② increasing consumption of energy and resources. ③ speeding of the transportation such as cars trains and airplanes. ④ quickening frequency and distance of people's traveling and visiting. ⑤ Revolution in the field of communication technology causing the increasing amount and frequency of the binformation exchange. ⑥ accelerating development of economy ⑦ full expression of personal characteristics( profession, major, salary, hobby, belief, second-culture, political points, preference in the consumption and personal way of thinking)...

The increase of the public needs we've discussed above is one of the important reasons for the increasing amount of management of public affairs. This means that there is logical relation between them; change of private Maslow's phenomena---change of public Maslow's phenomena---change of needs for the public management---change of the content of the public affairs(and its content).

<sup>14</sup> molecular average kinetic energy is the explanation to the essence of temperature in physics. As the increase of molecular average kinetic energy, the temperature will increase, and at the same time the degree of the disorder among the molecules of the inner part of a subject will also increase because of the characteristic of molecule's Brown Movement (stochastic and disorderly movement).

## 4. MASLOW'S LAW IN PUBLIC REALM VS RATIONAL EXPANDING OF GOVERNMENT

### 4.1 Analysis of Maslow's law in public realm Vs rational expanding of government

Now, I will further explain the reason theoretically why public affairs constantly increase as the developing of economy. In another word, we'll analyze the rational expanding of the scale of the government and public managing departments.

Looking back on the historical tracks of the development of poor society towards advanced society, we can easily find that there are several characteristics:

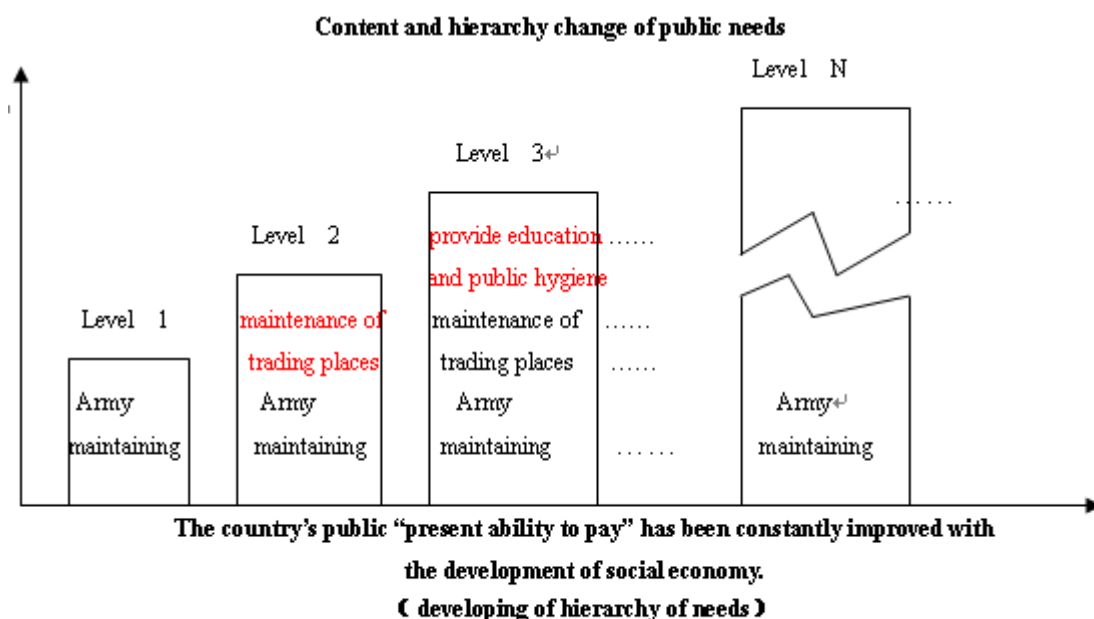
**4.2.1** In remote ancient time, at the beginning of the establishment of a tribe or a country, there were few public resources, so people had a very low public "present ability to pay". At that time, public Maslow's phenomena which was a gathering of many different poor individuals' needs was at a low level, so was the content of public Maslow's needs. On the other hand, the country's public "present ability to pay" was low as the people's. There was only 1 army in the country, which was the most basic tool to keep the country running. The country at that time couldn't provide any other public services that people needed.

**4.2.2** When the economy and the society was developed a little further, social/public Maslow's phenomena, the gathering of various individuals' needs, began to come into a higher scale, so did the content of public Maslow's needs. At the same time, the country's public "present ability to pay" was also promoted a little. Besides keeping armies, the most basic tool to help the country exist, the country was able to provide a few more public services, such as maintaining social security, making laws and rules.

**4.2.3** As the constant development of economy and society, public Maslow's phenomena entered another higher scale, accompanying which was the promoting of public Maslow's needs. On the other hand, the financial situation of the country got much better than ever, so the country's public "present ability to pay" was also improved. Thus, besides keeping armies, maintaining social security, making laws and rules, people could be provided a few more public services. For example, the country offered primary education for people, built trade markets and maintained trade rules.

**4.2.4** Economy continues developing, and public Maslow's needs are becoming more and more colorful, then the country's public "present ability to pay" will be greatly improved. Now, the country can provide us diversiform public services, such as free education for a longer time, more higher education, social medical service system, social security, better cultural surroundings, eco-environment, and more good basic structures.

In a word, social/public Maslow's needs are the theoretical basis and impetus of the development of public service. And public "present ability to pay" is the material base of supplying public service. We can draw these two inclusions into figure 2.



Note: red words are needs that are newly increased

**Figure2. Relation among Maslow's need hierarchies in public realm**

According to Maslow's law in Public realm, the content of public service is tending to increase, the reflection of which we may see in the field of government activities can be the following: constant expanding of financial scale, increase of

government servants, or the enhancement of government function. However, the changes of these 3 kinds are always mixed with reality, which makes things more complicated.

**Form 1: Features of the Development of Government Scale According to Maslow's Law in Public Realm**

	public affairs management public function	the scale of government function	the scale of finance	The scale of government personnel	Remark
Combination	Increase or expand constantly	Stay the same or decrease some extent	slowly increase	Gradually decrease	A large quantity of public affairs are partaken by non-government organization
Combination	Increase or expand constantly	restrictedly enlarge	Steadily enlarge	approximately Stay the same	part of public affairs are partaken by non-government organization
Combination	Increase or expand constantly	enlarge	rapidly enlarge	gradually enlarge	A few public affairs Are partaken by non-government organization

In the combinations in form 1, if the mode of public management isn't reformed, the scale of government personnel will enlarge. If the mode of public management is befittingly reformed, the scale of government personnel may stay the same. And if we reform the mode of public management as well as take measures to reform the framework of government, the scale of the government personnel may decrease. Generally speaking, in most cases, in the historical periods, the change of the scale of government personnel is corkscrew.

## 5. MASLOW'S LAW IN PUBLIC REALM VS THE DEMONSTRATIVE ANALYSIS OF THE SCALE OF GOVERNMENT

Well, in these different combinations, which is most probably come into reality? We can analyze it through demonstration. Demonstrative analysis government scale is firstly relevant to the measuring index of government scale. ZhangYalin (2001) pointed out that usually there are three

measurable figure indexes which have comparative meaning to search the government scale, they are the following; the number of administrative framework, the proportion of government servants, the whole population and the number of employees, and the proportion of government spending and consumption in local GDP.<sup>15</sup> While professor MaoShoulong presented his standard index of measuring government scale, which should be the following; the scale of government personnel, the number of administrative framework, financial spending of government, the amount of government affairs.<sup>16</sup> Linking the reality we're discussing, here, I choose two indexes: relative scale of government personnel(the proportion of 10,000 persons and the number of government personnel) and relative index of financial scale(average finance and taxes) to make demonstrative analysis.

Theoretically speaking, Maslow's law in public realm is one of the reasons for the rational expanding of the whole section of public management including government and non-government organizations. And this rational expanding may contain the expanding of personnel, function and the expanding of public resources. I'd like to focus on the relationship between public Maslow's phenomena and the rational expanding of government scale. Because of the difficulty of collecting orbicular and systematic materials of the scale of government functions, we collected the data of some countries' financial scale and the scale of government officials in the year 2002(referring accessional form №1 and form №2) and the lengthways data of economic development and government scale of one typical sample (Macao). We divided the data into two groups according to different economic level of different countries (regions). And then on the base of this division, we divided these countries into 2 groups again, which was according to the relative scale of government officials and finance (referring form №2 and form №3).

### 5.1 Analysis of the level of economic development and the scale of government personnel

The explanation of accessional form 1; it is known for all that government system varies from country to country, so does partitioning the range of the government officials. Generally speaking, the range of the government officials can be divided into small range, middle range and big range. While at the same time, there's huge difference in enumerating the range of government officials of different countries or regions, so there's more difficulty in transverse comparing the scale of government officials.

<sup>15</sup> ZhangYalin, Suitable Government Scale and the Administrative Framework Reforming in Our Country, comparison of social economic systems,2001, (03).

<sup>16</sup> MaoShoulong, the scale and bound of government (chinese) essay center > politics > democratic system.

<http://paper.studa.com/2003/4-23/2003423173726.html>;

MaoShoulong and LiMei, *Economic Analysis of Limited Government*, published by Shanghai Sanlian Publishing House.2000, page 87.

In addition, there may be such difficulty as following: ① Not all the countries will publicize the statistic data in the open media periodically. In fact, many counties don't do so. ②Different countries have different ranges of counting the number of government officials, and it's greatly different. So it's very hard to find the countries which have an approximately same range of counting the number of government officials.

Form the analysis of detailed data of government officials in different countries, I found that in the data publicized by different countries or regions, the ranges of public administrative personnel are relatively the same. And the people contained in the statistic are the following; permanent personnel including government officials, authorized working people in all levels of government office, council schools, and public operated institutions (barring soldiers), and non-permanent personnel, which include temporary employees and non-permanent government employees. Thus, in this article, we choose the number of public administrative personnel as the standard to analyze the scale of government personnel, not the number of government officials. Well, there's still a certain warp in the statistic of public administrative personnel, so we categorize the collected data of public administrative personnel and then have the categorized data illegible. In another word, we analyze the data after changing it into category-defining data (referring form №2).

For the data collected, I take the level of economic development of different countries (regions or cities) as independent variable, and the government scale (relative financial scale and public administrative personnel) as dependent variable. Then I analyze them with a form. And coefficient  $\lambda$  is taken in the relative analysis.

$$\lambda = \frac{\sum f_{oi} - F_{Y0}}{N - F_{Y0}} \quad (9.6)$$

In the formula,  $f_{oi}$  is the frequency of X, distributed along Y;  $F_{Y0}$  is the frequency of the mount distributed along the boundary of Y, and N is the amount of the whole unit. Coefficient  $\lambda$  is chosen between 0 and 1, the bigger the  $\lambda$  is, the closer X and Y are related. This formula has a feature of decreasing the rate of errors.<sup>17</sup>

In the calculation of the data in form2, the relative coefficient of the level of economic development and the relative scale of public personnel is :  $\lambda = 0.5333$ , which indicates that they (X、Y) are relevant to a middle extent.

$$\chi^2_0 = 11.34, \quad \chi^2_{(2-1)} = \chi^2_{(1)} \\ \chi^2_{0.001} = 10.827, \chi^2_0 > \chi^2_{0.001}$$

<sup>17</sup> LuShuhua. *Social Statistics*, published by Peking University Publishing House, the revised edition of June,2001, page320 to 321.

ZhangYan, *Social statistics — Principles and Methods*, published by Nanjing University publishing house, 2000, page 191to192.

The hypothesis which has nothing to do with X and Y won't be considered on the level of 0.001. That's to say, the scale of the economic development is highly related with the relative scale of public administrative personnel. And according to that formula, the feature of decreasing the rate of errors, we can decrease the rate of errors to 46.67% in predicting the relative scale of public administrative personnel (X) by the level of economic development (Y) .

## 5.2 Relevant analysis of the level of economic development and financial scale

In the analysis of this section, we take average GDP the standard of measuring the economic development, international dollars on the base of equal purchasing power for currency unit, and average financial index (international dollars) for financial scale. We can find the basic data in form 2. And we take analyzing method of Person's relevant coefficient method, independent variable is average GDP (X: international dollars), dependent variable is average financial index (Y: international dollars). According to SPSS statistic software, we can get the calculation as following. (referring form 3&4)

The calculation shows that the coefficient of the level of economic development and average financial scale reaches as high as 0.904. and the double star symbol marked on the top right corner indicates that the probability is less than 0.01 of

the statistic proof at a notable level of 0.01( what appears in the form is 0.000). It implies that the level of economic development is obvious positively related with the level of average finance.

## 5.3 Lengthways investigation of a typical sample

In addition, from the lengthways investigation of the data of Macao's scale of public personnel, financial expense and economic development (1990----2002), we can see that the scale of public administrative personnel, public expense and the percent of this expense of GDP is taking on a trend of ascending. What's more, Macao has been keeping a good situation in politics, economy and all sides of the society since it's returning in 1999, which is highly and extensively respected.

**Form 3 : Descriptive Statistics**

	Mean	Std. Deviation	N
X: average GDP (international dollars) ©	12340.00	9218.507	37
Y: average finance (international dollars) ©	3237.976	2763.0251	37

**Form 4 : Correlations**

		X: average GDP (international dollars) ©	Y: average finance (international dollars) ©
X: average GDP (international dollars) ©	Pearson Correlation	1	.904**
	Sig. (2-tailed)	.	.000
	N	37	37
Y: average finance (international dollars) ©	Pearson Correlation	.904**	1
	Sig. (2-tailed)	.000	.
	N	37	37

\*\* Correlation is significant at the 0.01 level (2-tailed)

**Form 2: Paratactic Analyses of the Level of Economy and the Relative Scale of Public Realm**

relative scale of public personnel	The level of economic development (X)		Boundary distributing (Y)
	Comparatively high	Comparatively low	
<b>Relatively big</b>	Luxemburg city, Britain, Luxemburg Canada, France, Germany, Iceland New Zealand, the Atlantic city of the U.S.A. Holland Italy , (12)	Portugal, Maldives, Iraq (3)	15
<b>Relatively small</b>	Norway, Seattle, Edinburgh Japan , (4)	Taipei, Kaohsiung, Tainan, Taizhong, Xinzhu, Keelung, Korea, Iran, Macao, Singapore, Hongkong, Brazil Andara India (13)	17
Boundary distributing (X)	16	16	32



\* the watershed of the “relatively big” scale and “relatively small” scale of the public administrative personnel (direct public administrative personnel) is 400/ every 10,000 residents

Accessional figure 3

### Increasing scale of Macao's government officials compared with other social index since 1990

Index Year	Scale of personnel			Financial scale			
	Popu- lation person	the number of public servants	GDP 0.1 billion Macao dollars	Public expense 0.1 billion Macao dollars	Percent of Public expense in GDP (%)	Total expense of government 0.1 billion Macao dollars	Percent of Total expense of government in GDP (%)
1990	339,510	14,664	261.8	44.6	17.04	55.1	21.05
1991	363,782	15,371	303.3	60.4	19.91	76.6	25.26
1992	377,983	15,111	395.2	74.5	18.85	88.9	22.49
1993	389,984	15,679	451.9	82.8	18.32	104.2	23.06
1994	403,570	16,415	501.1	85.3	17.02	112.5	22.45
1995	415,030	16,574	553.3	102.8	18.58	154.7	27.96
1996	415,172	16,992	552.9	88.1	15.93	146.8	26.55
1997	419,417	17,589	558.9	99.8	17.86	142.4	25.48
1998	425,190	17,037	519.0	106.5	20.52	155.1	29.88
1999	429,632	17,239	490.2	98.1	20.01	166.4	33.95
2000	431,506	17,412	497.4	87.6	17.61	150.2	30.20
2001	436,686	17,533	498.6	96.7	19.39	152.2	30.53
2002	441,637	17,368	540.7	95.8	17.72	134.9	24.95

\*data resource; materials publicized by Macao statistical bureau.

## 6. CONCLUSION

Through the theoretical analysis and testifying of the demonstrative materials above, we can find that the level of the regional economic development is middling related with the government scale (the scale of personnel and financial expense), which, to some extent, indicates that it is the economic development that cause the unceasing increase of public needs, then cause the expansion of the section of public management. And this is the basic content contained in

Maslow's law in public realm of what we've discussed in the article.

Thus, we can think that although there are various reasons for causing the expanding of government, besides Parkinson's law and other negative and irrational reasons summarized by other scholars, there are still some positive and rational reasons for the expansion, for example, we've generalized the Maslow's law in public realm. Therefore, we should analyze the reasons and law of the development and changes of government scale with a comprehensive look, which is both theoretically and practically meaningful.

## Accessional data

### Accessional figure 4

#### Statistics of administrative personnel from following websites or e-mails

Ireland <http://www.cso.ie/publications/distrib/psempearn.pdf>  
 Germany <http://www.destatis.de/basis/e/fist/fisttab05.htm>  
 Finland <http://www.financeministry.fi/tiedostot/pdf/en/40756.pdf>  
 Sweden [http://www.scb.se/templates/Publikation\\_\\_\\_64345.asp](http://www.scb.se/templates/Publikation___64345.asp)  
 Iran <http://www.sci.or.ir/>

Britain <http://www.statistics.gov.uk/CCI/article.asp?ID=426&Pos=1&ColRank=2&Rank=224>

Norway 2003 © Statistics Norway

Canada <http://www.statcan.ca/english/Pgdb/govt54a.htm>

Seattle <http://www.cityofseattle.net/budget/03-04budget/Statistics.pdf>

Korea <http://www.fmpc.gov.cn/chn/wjb/zzjg/yzs/gjlb/1236/1236x0/default.htm>

<http://www.nso.go.kr/eng>.

Edinburgh [http://download.edinburgh.gov.uk/FinancialStatements/KeyFacts\\_2002-2003.pdf](http://download.edinburgh.gov.uk/FinancialStatements/KeyFacts_2002-2003.pdf)

France: [http://www.insee.fr/en/home/home\\_page.asp](http://www.insee.fr/en/home/home_page.asp).

Japan: <http://www.stat.go.jp/english/data/nenkan/1431-22.htm> and [webmaster@stat.go.jp](mailto:webmaster@stat.go.jp)

Australia : <http://www.abs.gov.au/>

New Zealand : <http://www.stats.govt.nz/> & <http://www.lgnz.co.nz/>.

<http://www.lgnz.co.nz/localgovt/lgfacts/>. [nfo@stats.govt.nz](mailto:nfo@stats.govt.nz)

Luxemburg : [http://www.statec.lu/html\\_en/](http://www.statec.lu/html_en/).

[statec.post@statec.etat.lu](mailto:statec.post@statec.etat.lu)

Iceland : <http://www.hagstofa.is/template40.asp?PageID=261>. [klchee@fbeps.ubd.edu.bn](mailto:klchee@fbeps.ubd.edu.bn)

Negara Brunei Darussalam:

Information Department Prime Minister's Office: [pelita@brunet.bn](mailto:pelita@brunet.bn)

The World Factbook: <http://www.odci.gov/cia/publications/factbook/geos/bx.html>.

Singapore <http://www.psd.gov.sg>. [psd\\_pau@psd.gov.sg](mailto:psd_pau@psd.gov.sg)

information about Lasvegas, Atlantic City, Seattle is from the website of American National Statistical Bureau :

<http://www.stats.gov.cn/tj/j/>

Taiwan : <http://www.dgbasey.gov.tw/>. (surfing internet in Macao)

India : It's said that Indian government officials always say; "wait a few minutes more." ,

<http://www1.10thnpc.org.cn/chinese/WISI/109111.htm>

Iraq : Iraqi government officials gets their first salaries

<http://www.zaobao.com/special/newspapers/2003/05/chinanews260503.html>

Holland : France facing huge financial deficit, French minister of finance determined to fight to win or die

[http://news.163.com/2004w04/12535/2004w04\\_1083054381139.html](http://news.163.com/2004w04/12535/2004w04_1083054381139.html)

Brazil : Brazilian civil serverants would strike in the first 10 days of July.

[http://riodejaneiro.mofcom.gov.cn/article/200306/20030600099916\\_1.xml](http://riodejaneiro.mofcom.gov.cn/article/200306/20030600099916_1.xml)

### Accessional figure 1

### Relative scale of administrative personnel

unit : 1/every 10 thousand

Countries (regions, cities )	Relative figure ( comparative index )		Remark
	Direct public administrative personnel	Public administrative personnel	
Portugal	35,45	694,21	
Luxemburg		438,41	
Luxemburg City		411,88	
Taipei	164,39	299,81	
Kaohsiung	53,61	224,00	

To be Continue

Tainan	28,87	164,00	
Xinzhu	32,35	173,74	
Keeling	64,27	206,74	
Hongkong	139,26	260,15	
Britain	301,67	645,99	
Edinburgh		338,51	
France	281,82	506,97	
Italy		466,25	
Holland		435,01	
India	98,23		
Sweden	220,59	490,89	
New Zealand		583,13	
Japan		246,80	
Seattle		186,05	
Norway	100,15	242,19	
Iceland		1191,38	
Singapore	142,86	285,71	
Iraq		631,57	
Brazil	46,41		
Canada	621,45	830,75	
Korea	33,13	112,59	
Germany	298,79	583,84	
Iran	133,86	364,52	
Macao	112,59	394,73	
Maldives	441,07	976,41	

\*data source: stat and calculation from websites of government or government-researching institution in correspond countries. ( sources of figure of public administrative personnel in different countries, regions or cities are listed in accessional figure 4)

Data source : figure of average income, finance scale and average finance scale is from *international stat almanac (2003)* , Chinese Statistic Publishing House.

Page 46 to 49, figure 4—2, GDP (dollars)

Page 111 to 114, figure 5—1 population

Page 55, figure 4—5 main index for GDP measured by purchasing power

Page 155, figure 7—1 Finance and budget surplus of central government/proportion of deficit and GDP (note; central government is the units which have the jurisdiction of the country's territory )

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